

Patent Application
Docket No. P14122US

REMARKS

Applicant thanks the Examiner for his report. Reconsideration and allowance of the application is respectfully requested in view of the following remarks. Claims 1-16 and 21-26 are currently pending in the application. Claims 1, 11, 14 and 21 are amended. Claims 4-5, 10, 12-13, 15-16 and 24-26 are cancelled without prejudice to the Applicant.

Claim rejections – 35 U.S.C § 102(e)

Claims 1-10, 14-16, 21, 22, 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Maggenti. Applicant respectfully traverses the rejection. Independent claims 1 and 21 have been amended to clarify the functioning of the present invention and with hopes of expediting prosecution of the case. Claims 4-5, 10, 15-16 and 24-25 are cancelled from the application.

Independent claim 1 is now directed to a method of updating radio network data in a radio telecommunications network. A Base Station (BS) is located in the radio telecommunications network. The BS itself comprises a plurality of devices. It is now emphasized that the devices of the present invention are comprised within the BS.

The BS is interfaced with a Mobile Switching Center (MSC) through an Internet Protocol (IP) packet data network. The BS is further assigned an IP address valid on the IP packet data network. The fact that the IP address is valid on the IP packet data network interfacing the MSC with the BS has now been clarified.

The MSC sends device update data to the BS in an IP message over the IP packet data network. It is now clarified that the IP message is sent from the MSC to the BS over the IP packet data network. Likewise, it has been added that the BS receives the IP message over the IP packet data network.

Finally, at least one of the plurality of devices is updated by the BS using the device update data received in the IP message. It has been emphasized, in this last step, that the device update data received in the IP message is used to perform the update of the at least one of the plurality of devices of the BS. The device update data of the present invention generally refers to update data used to perform radio network data updates or

Patent Application
Docket No. P14122US

software updates to provide new device functionality. For example, a radio network data update may provide a channel number to a particular device in the BS. An example of a software update may change the functionality of a device in the BS from a Digital Traffic Channel (DTC) device to a Digital Control Channel (DCCH) device in the event of a DCCH device failure. This is mentioned in the description as filed on page 2, lines 8 to 13.

Maggenti generally relates to performing coverage control for multicast services in a wireless network. Maggenti presents the use of a BS having multiple end terminals within its radio coverage area (col 3, lines 43-46). The BS of Maggenti communicates with an MSC for transiting well-known voice or data services toward and from the end terminals (col 3, lines 54-57, col 4 lines 43-45 and lines 26-38). Maggenti also teaches how an Interworking Function (IWF) interfaces with an application source over an IP packet data network. The IWF is responsible for sending and receiving IP transmissions between the application source and the end terminals (col 4, lines 26-33). The IWF is also responsible for assigning IP addresses to the end terminals. The IP addresses assigned by the IWF are valid on the IP network interfacing the application source (col 8, lines 38-44 and 6-11). The IWF is usually located in the MSC, but may also be located in the BS (col 4, lines 28-30). All traffic (voice or data) sent between the IWF and the end terminals is sent as is well known in the art (col 4, lines 39-41).

Maggenti teaches how multicast messages are sent from the application source to registered end terminals via the IWF. The BS distributes the information received from the IWF to the registered end terminals located within its coverage area. Maggenti further enables end terminals to manage their membership to various multicast groups.

As can be appreciated, Maggenti relates to a radio telecommunications network, as the present invention, and mentions the use of a BS and an MSC. However, Maggenti does not mention the BS having a plurality of devices therewithin. It rather suggests, as is well known in the art, that the BS has multiple end terminals within its radio coverage area. Furthermore, Maggenti does not teach how to connect the BS to the MSC using an IP packet data network. It does not either teach that an IP address can be assigned to the

Patent Application
Docket No. P14122US

BS for the IP packet data network. Maggenti presents an IP network, but it is used between the IWF and the application source rather than between the BS and the MSC. Likewise, Maggenti does not mention the MSC sending an IP message to the BS over the IP packet data network. Another important aspect of the present invention not mentioned by Maggenti is the content and use of the IP message sent from the MSC to the BS. Indeed, the IP message of the present invention sent to the BS contains device update data, which is not even mentioned by Maggenti. Likewise, Maggenti does not suggest, as is the case in the present invention, to use the device update data received in the IP message to update at least one of the devices located within the BS.

It should also be readily understood that the use of multicast messages in Maggenti cannot be assimilated to the IP message of the present invention. Indeed, the multicast messages of Maggenti are sent from an application source to an end terminal via the IWF. Maggenti never suggests assigning an IP address to the BS since the multicast message is not addressed thereto and is of no interest to the BS. The BS simply needs to forward the information contained in the multicast message received from the application source using well-known radio link techniques toward the registered end terminals located within its coverage area. In the present invention, the IP message is directed to the BS and used thereby.

In the final portion of the Office action, the Examiner argued that Maggenti enables a base station to connect "multiple end points [...] within its coverage area and the MSC 102 **through IP data packets**" [emphasis added]. The Examiner further states that "WCDs 306 are assigned an IP address **for communication with base station 104 and MSC 102**" [emphasis added]. Applicants respectfully submit that the Examiner erred in his assessment of Maggenti. The Examiner based his opinion on col 7, lines 66-67 and col 8, lines 1-25 and 53-65 of Maggenti. However, reading the whole document, it is clear for a person normally skilled in the art that Maggenti did not envision IP addressing for base stations and Mobile Switching Center (MSC) as considered by the Examiner.

Furthermore, the description of Maggenti, do not provide support regarding IP addressing for base stations and MSC. Specifically, it is mentioned on col 7, lines 54-56

Patent Application
Docket No. P14122US

that end terminals are capable of communicating with base stations using voice services of data services. Regarding voice services, col 7, lines 56-64 specifies that a dedicated channel be used for each voice call between the end terminals and the base station. The dedicated channel, as it is well known in the art, is not an IP connection. Concerning data services, on col 8, lines 1-3, Maggenti mentions that a channel is established between an end terminal and a base station only long enough to transmit data packets. The channel, in the case of data services and as it is well known in the art, is not an IP connection either. This is further emphasized by col 8, lines 22-28 defining the channel as a shared access channel, a dedicated traffic channel, a control channel, an SMS channel or any other means for transmitting the request from the end terminal to base station.

Finally, as is well known in the art, IP traffic transiting between an end terminal and the application source to be encapsulated over the air interface up to an IWF (also referred to in Maggenti as router col 8, lines 39-40) where it is decapsulated and forwarded appropriately in the IP network (see col 8, lines 49-52). Moreover, Maggenti mentions, on col 8, lines 18-20, that the IWF is preferably assigning the IP addresses to end terminals. As can be noted, there is no mention of assigning IP addresses to neither base station nor MSC from the Interworking Function or from any other node. Moreover, Maggenti do not provide any other mechanism to assign IP address to those nodes. Thus, it cannot be said that Maggenti teaches how end terminals are assigned an IP address for communication with base station and MSC since these nodes in Maggenti do not have any IP address. Likewise, a base station in Maggenti cannot connect multiple end points within its coverage area and the MSC through IP data packets for the same reason.

In view of the foregoing, Applicant respectfully requests withdrawal of the rejection of independent claim 1. Since claims 2-3, 6-9, and 14 depend ultimately from claim 1, the same reasoning can be brought in their favor. Consequently, confirmation of their patentability is also requested.

Arguments similar could also be brought in favor of independent claims 21, which relates to an IP base station.

Patent Application
Docket No. P14122US

In view of the foregoing, Applicant respectfully requests withdrawal of the rejection of independent claims 21. Since claim 22 depends ultimately from claim 21 confirmation of its patentability is also requested.

Claim rejections – 35 U.S.C § 103(a)

Claims 11-13, 23 and 26 are rejected under 35 U.S.C 103 (a) as being unpatentable over Maggenti in view of Harsh (US 6,212,175). Claims 12-13 and 26 are cancelled from the application.

While Harsch mentions that User Datagram Protocol (UDP) is related to IP, it does not teach how those concepts can be applied to updating radio network data in a plurality of devices deployed in a base station. Moreover, all claims rejected under 35 U.S.C 103(a) are dependent on independent claims previously discussed.

Therefore, Applicant respectfully requests withdrawal of the rejection of dependent claims 11 and 23.

CONCLUSION

In view of the foregoing, Applicants submit that the application is now in condition for favorable action.

Should the Examiner wish to discuss the present amendment or present patent application, he is invited to contact the undersigned at (514) 345-7891.

Respectfully submitted

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